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facility. On September 16, 1852, an electric clock at London Bridge Station was erected, and connected by wire with an electric clock at the Royal Observatory, Greenwich. The first time-signal sent from the Royal Observatory was received at London Bridge Station at 4 p.m. on August 5, 1852; and on August 9, 1852, Dover received a time-signal for the first time from the Royal Observatory direct, and it was made visible at certain first-class stations between London and Dover. After that the system rapidly spread, its success depending greatly on the scientific skill and zeal of Mr. Walker.

He was elected a Fellow of the Royal Society in 1855, and he was a late President of the Meteorological Society, and of the Society of Telegraph Engineers. He was elected a Fellow of the Society on January 8, 1858.

Emile Plantamour.—In the Annual Report of last year the death of Gautier was announced, and now we have to record the death of his pupil and successor as Professor of Astronomy and Director of the University at Geneva, which occurred on September 7, 1882. Plantamour was born at Geneva in 1815. He received his early education in the old college, founded by Calvin, after which he spent eight years in the then celebrated school of Hofroyl. In 1833 he entered the Geneva Academy, where he became one of Gautier's most promising pupils. After graduating in philosophy, he resolved to make the study of astronomy the work of his life, a design in which he was encouraged by Gautier, who promised to vacate his chair in Plantamour's favour when the latter had completed his university education. The chief reason—an affection of the sight—which caused Gautier to desire to retire from the direction of the Observatory was referred to in the obituary notice of Gautier. From Geneva Plantamour proceeded to Paris, where he studied for two years under Arago. He also was a pupil of Bessel at Königsberg, where, in 1839, he took the degree of doctor, the subject of his thesis being the methods of calculating the orbits of comets. From Königsberg he went to Berlin, and worked for some time with Encke, who recognised in his quickness of observation and aptitude for complex calculations his special fitness for the career to which he intended to devote himself. On his return to Geneva Plantamour received the double appointments of the professorship of Astronomy in the Academy, which has since been transformed into a University, and director of the Observatory. In 1848 he accepted also the chair of Physical Geography, and he retained all three positions until his health began to fail him a few months before his death. His publications chiefly related to atmospheric electricity, observations of comets, and meteorological observations made on the Great St. Bernard. Special reference should be made to the important investigations of the diurnal oscillations of the soil undertaken by him by means of spirit levels, and of which accounts are given in the *Comptes Rendus* for 1878

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and 1879. Much of his time was devoted to meteorology, and his papers in the *Bibliothèque Universelle* on the subject were numerous; he was also one of the most active members of the Helvetic Scientific Society for the observation of atmospheric phenomena. He devoted attention to Geodesy, and in 1861 became the representative of Geneva on the Paris Geodetic Commission. He was also a useful member of the International Geodetic Association which met a few years ago at Geneva. In connection with the Genevan Society of Arts he organised a watch and chronometer competition, which has proved of great value to the staple industry of Geneva. Watches and chronometers are sent to the Observatory and tested there, the results being published, and prizes awarded to the best timekeepers. Four years ago he added to the observatory at his own expense a refractor of ten inches aperture, and he erected the building for its reception. He was a man of fortune, and might have devoted his life to social enjoyment and ease; but he was deeply attached to science, and preferred to retain his posts in the University, although the modest salary he received scarcely covered his expenses.

He was an honorary member of the Turin Academy, and a correspondent of the French Institute. He was elected an Associate of the Society on April 12, 1844.

JOHANN KARL FRIEDRICH ZÖLLNER was born at Leipzig on November 8, 1834, and died on April 25, 1882. In 1872 he was appointed Professor of Physical Astronomy in the University of Leipzig. He was the author of numerous papers in the *Berichte* of the Saxon Academy of Sciences, on subjects connected with Spectrum Analysis and the constitution of the Sun, and also of several larger works, the most important of which was published in 1865 under the title *Photometrische Untersuchungen.* Upon the same subject he also published his *Grundzüge zu einer allgemeinen Photometrie des Himmels.* His researches on the philosophy of space, and other subjects, with his theories of light and electricity, appeared in the three volumes of his *Wissenschaftliche Abhandlungen.* In 1872 he published his work *Ueber die Natur der Cometen*, upon a third edition of which he was engaged at the time of his death. He was the inventor of several appliances for spectroscopic and photometric researches. He was elected an Associate of the Society on November 8, 1872.

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